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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,073	07/06/2005	Roland Kratzer	09086-00217-US	4476
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CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
			EXAMINER	
			PASTERCZYK, JAMES W	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/521,073

Applicant(s)

KRATZER, ROLAND

Examiner

J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/12/05, 2/14/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. Claims 1 and 10-13 are objected to because of the following informalities: in claim 1, the capital letters denoting each separate ingredient in the catalyst should all be in parentheses for the sake of clarity and consistency; in l. 5 make "Wherein" lower case; in l. 9 change "or" to a comma; in l. 13 change the first "or" to a comma; in l. 18 change the period to a comma or semicolon. In claim 10, change "type" to --group containing--. In claim 11, p. 7 of the preliminary amendment, l. 2, change "en" to --an--; in l. 17 insert a comma after "halogen"; in l. 18 change "be joined" to --are joined--; in l. 21 change "can each be" to --are each--; on p. 8, l. 4, insert --or-- between the second and third chemical groups, on l. 9 change "can each be" to --are each--; on p. 9, l. 10-11, the "cycloalkyl or" portion looks like it belongs in l. 10 after the "alkyl" portion. In claim 12, l. 3, delete the first "are identical, in l. 4 insert --two-- after the second "or", and in l. 5 delete the two commas and insert a comma after "group". In claim 13, l. 2, change "are" to --is--; on p. 12, l. 1, change "the" to --their--, and end the following line with a semicolon instead of a period; still on p. 12, end l. 15 with a semicolon. Appropriate correction is required.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, l. 3, (B) is recited as being an organometallic compound. This requires that at least one of the  $R^{1-3}$  groups be a hydrocarbyl bonded to  $M^1$  via a carbon atom, yet as currently recited such a bond is not required. Organometallic also requires that the  $M^1$  atom be a metal, yet in many dependent claims  $M^1$  may be boron which has no metallic properties whatsoever,

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hence the use of the term “organometallic” appears to contradict the specifics of the limitation on (B), although the definition of  $M^1$  explicitly requires it be *inter alia* a group 13 metal.

In claims 3 and 15-18, boron is recited as being part of the metal compound of formula V from claim 1, yet as recited above boron has no metallic properties and thus is not in fact a metal.

In claim 6, p. 5 of the amendment, l. 6, change the first “or” to a comma, insert a comma before the second “or” and delete “ $R^4$  is”. Claim 9 should be likewise amended.

In claim 11, p. 7 of the amendment, l. 6, the phrase “for example” renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). In l. 12 of that page correct M to the proper symbol for this instance of a metal atom. On p. 8 of the amendment, l. 4-5, correct the superscripts on the R variables; in the definitions of  $R^{15A}$ , correct the superscripts on the various M variables; on p. 9 of the amendment, l. 6, the last three groups are missing a second valence as the previous page l. 11 requires.

In claim 13, p. 11, 6<sup>th</sup> line from the bottom, add the proper superscript to X in the text; on p. 12, do the same to the second line from the end.

In claims 19 and 20, second line of each, correct “Lewis acid” to --Lewis base--.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnen et al., USP 6,482,902 (hereafter referred to as Bohnen I) in view of Bohnen, USP 6,417,302 (hereafter referred to as Bohnen II).

Bohnen I discloses the invention substantially as claimed when one considers that the combination of the active hydrogen-containing group (C) of the present claims plus the organometallic compound (B) of the present claims corresponds to the ingredient d) of col. 2, l. 35-54 and examples 1-4 of the prior art (col. 2, l. 14 to col. 3, l. 16; col. 3, l. 41 to col. 5, l. 31; examples 1-4, 6, 8, 11, 13, 17-25).

Bohnen I lacks disclosure of combining the all the reagents simultaneously without isolation of intermediates, i.e. a "one-pot" synthesis.

However, Bohnen II teaches that combining reagents to make a one-pot synthesis of similar catalysts is conventional in the art (examples 1 and 7; col. 1, l. 47 to col. 6, l. 39).

It would have been obvious to one of ordinary skill in the art to apply the teaching of Bohnen II to the disclosure of Bohnen I with a reasonable expectation of obtaining a highly-useful method of making a supported catalyst with the expected benefit of fewer steps and thus lower cost of production.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Pasterczyk

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6/1/06



J.A. LORENGO  
SUPERVISORY PATENT EXAMINER